

# SEQUENCE LISTING

<110> Genencor International, Inc.

<120> Methods for Production of Proteins in  
Host Cells

<130> GC559-PCT

<140> PCT/US00/34055

<141> 2000-12-14

<150> US 09/470,830

<151> 1999-12-23

<160> 44

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 54

<212> DNA

<213> Escherichia coli

<400> 1

gaagttgaaa ccaaactctgc tgggtggtatc gttctgaccg gttctgctgc tgcg

54

<210> 2

<211> 18

<212> PRT

<213> Escherichia coli

<400> 2

Glu Val Glu Thr Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala

1

5

10

15

Ala Ala

<210> 3

<211> 19

<212> PRT

<213> Escherichia coli

<400> 3

Glu Val Glu Thr Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala

1

5

10

15

Ala Ala Lys

<210> 4

<211> 19

<212> PRT

<213> Acyrthosiphon pisum

<400> 4

Glu Val Glu Ser Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala

1

5

10

15

Ala Gly Lys

<210> 5

<211> 19  
<212> PRT  
<213> *Haemophilus ducreyi*

<400> 5  
Glu Val Glu Thr Cys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala  
1 5 10 15  
Thr Val Lys

<210> 6  
<211> 19  
<212> PRT  
<213> *Pseudomonas aeruginosa*

<400> 6  
Glu Glu Glu Thr Lys Thr Ala Gly Gly Ile Val Leu Pro Gly Ser Ala  
1 5 10 15  
Ala Glu Lys

<210> 7  
<211> 19  
<212> PRT  
<213> *Allochromatium vinosum*

<400> 7  
Glu Glu Glu Arg Leu Ser Ala Gly Gly Ile Val Ile Pro Asp Ser Ala  
1 5 10 15  
Thr Glu Lys

<210> 8  
<211> 19  
<212> PRT  
<213> *Coxiella burnetii*

<400> 8  
Glu Glu Glu Arg Thr Ser Ala Gly Gly Ile Val Ile Pro Asp Ser Ala  
1 5 10 15  
Ala Glu Lys

<210> 9  
<211> 19  
<212> PRT  
<213> *Legionella micdadei*

<400> 9  
Glu Glu Glu Arg Thr Thr Ala Gly Gly Ile Val Ile Pro Asp Ser Ala  
1 5 10 15  
Thr Glu Lys

<210> 10  
<211> 19  
<212> PRT  
<213> *Sinorhizobium meliloti*

<400> 10  
Glu Ser Glu Glu Lys Thr Lys Gly Gly Ile Ile Ile Pro Asp Thr Ala  
1 5 10 15

Lys Glu Lys

<210> 11

<211> 19

<212> PRT

<213> Legionella pneumophila

<400> 11

Glu Glu Glu Arg Thr Thr Ala Gly Gly Ile Val Ile Pro Asp Ser Ala  
1 5 10 15

Thr Glu Lys

<210> 12

<211> 19

<212> PRT

<213> Brucella abortus

<400> 12

Glu Ser Glu Ala Lys Thr Ala Gly Gly Ile Ile Ile Pro Asp Thr Ala  
1 5 10 15

Lys Glu Lys

<210> 13

<211> 19

<212> PRT

<213> Bradyrhizobium japonicum

<400> 13

Asp Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Ile Pro Asp Thr Val  
1 5 10 15

Lys Glu Lys

<210> 14

<211> 19

<212> PRT

<213> Agrobacterium tumefaciens

<400> 14

Glu Ser Glu Ala Lys Thr Lys Gly Gly Ile Ile Ile Pro Asp Thr Ala  
1 5 10 15

Lys Glu Lys

<210> 15

<211> 19

<212> PRT

<213> Clostridium acetobutylicum

<400> 15

Glu Ala Glu Glu Thr Thr Lys Ser Gly Ile Val Leu Pro Ser Ser Ala  
1 5 10 15

Lys Glu Lys

<210> 16

<211> 19

<212> PRT

<213> Amoeba proteus

<400> 16  
 Glu Glu Glu Arg Thr Thr Ala Gly Trp Ile Val Ile Pro Asp Ser Ala  
 1 5 10 15  
 Thr Glu Lys

<210> 17  
 <211> 19  
 <212> PRT  
 <213> *Sinorhizobium meliloti*

<400> 17  
 Glu Ser Glu Glu Lys Thr Lys Gly Gly Ile Ile Ile Pro Asp Thr Ala  
 1 5 10 15  
 Lys Glu Lys

<210> 18  
 <211> 19  
 <212> PRT  
 <213> *Lactococcus lactic*

<400> 18  
 Glu Glu Glu Glu Lys Ser Met Gly Gly Ile Val Leu Thr Ser Ala Ser  
 1 5 10 15  
 Gln Glu Lys

<210> 19  
 <211> 19  
 <212> PRT  
 <213> *Streptomyces albus*

<400> 19  
 Asp Ala Glu Gln Thr Thr Ala Ser Gly Leu Val Ile Pro Asp Thr Ala  
 1 5 10 15  
 Lys Glu Lys

<210> 20  
 <211> 19  
 <212> PRT  
 <213> *Thermoactinomyces sp.*

<400> 20  
 Glu Thr Glu Glu Lys Thr Ala Ser Gly Ile Val Leu Pro Asp Thr Ala  
 1 5 10 15  
 Lys Glu Lys

<210> 21  
 <211> 19  
 <212> PRT  
 <213> *Bacillus subtilis*

<400> 21  
 Glu Ser Glu Glu Lys Thr Ala Ser Gly Ile Val Leu Pro Asp Ser Ala  
 1 5 10 15  
 Lys Glu Lys

<210> 22  
<211> 19  
<212> PRT  
<213> *Bacillus stearothermophilus*

<400> 22  
Glu Thr Glu Glu Lys Thr Ala Ser Gly Ile Val Leu Pro Asp Thr Ala  
1 5 10 15  
Lys Glu Lys

<210> 23  
<211> 19  
<212> PRT  
<213> *Mycobacterium tuberculosis*

<400> 23  
Glu Ala Glu Thr Thr Thr Ala Ser Gly Leu Val Ile Pro Asp Thr Ala  
1 5 10 15  
Lys Glu Lys

<210> 24  
<211> 19  
<212> PRT  
<213> *Bradyrhizobium japonicum*

<400> 24  
Asp Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Ile Pro Asp Thr Ala  
1 5 10 15  
Lys Glu Lys

<210> 25  
<211> 19  
<212> PRT  
<213> *Staphylococcus aureus*

<400> 25  
Glu Gln Glu Gln Thr Thr Lys Ser Gly Ile Val Leu Thr Asp Ser Ala  
1 5 10 15  
Lys Glu Lys

<210> 26  
<211> 19  
<212> PRT  
<213> *Mycobacterium bovis*

<400> 26  
Glu Ala Glu Thr Thr Thr Ala Ser Gly Leu Val Ile Pro Asp Thr Ala  
1 5 10 15  
Lys Glu Lys

<210> 27  
<211> 19  
<212> PRT  
<213> *Mycobacterium lepvae*

<400> 27  
Glu Ala Glu Thr Met Thr Pro Ser Gly Leu Val Ile Pro Glu Asn Ala

1                      5                      10                      15  
 Lys Glu Lys  
  
 <210> 28  
 <211> 19  
 <212> PRT  
 <213> Clostridium perfringens  
  
 <400> 28  
 Glu Ala Glu Glu Thr Thr Lys Ser Gly Ile Ile Val Thr Gly Thr Ala  
 1                      5                      10                      15  
 Lys Glu Arg  
  
 <210> 29  
 <211> 19  
 <212> PRT  
 <213> Synechococcus PCC7942  
  
 <400> 29  
 Glu Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Leu Pro Asp Asn Ala  
 1                      5                      10                      15  
 Lys Glu Lys  
  
 <210> 30  
 <211> 19  
 <212> PRT  
 <213> Synechococcus PCC6301  
  
 <400> 30  
 Glu Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Leu Pro Asp Asn Ala  
 1                      5                      10                      15  
 Lys Glu Lys  
  
 <210> 31  
 <211> 19  
 <212> PRT  
 <213> Synechocystis PCC6803  
  
 <400> 31  
 Pro Ala Glu Glu Lys Thr Ala Gly Gly Ile Leu Leu Pro Asp Asn Ala  
 1                      5                      10                      15  
 Lys Glu Lys  
  
 <210> 32  
 <211> 19  
 <212> PRT  
 <213> Chlamydophila pneumoniae  
  
 <400> 32  
 Glu Glu Glu Ala Thr Ala Arg Gly Gly Ile Ile Leu Pro Asp Thr Ala  
 1                      5                      10                      15  
 Lys Lys Lys  
  
 <210> 33  
 <211> 19  
 <212> PRT

<213> Leptospiya interrogans

<400> 33

Gln Glu Ala Glu Glu Lys Ile Gly Ser Ile Phe Val Pro Asp Thr Ala  
1 5 10 15  
Lys Glu Lys

<210> 34

<211> 19

<212> PRT

<213> Chlamydophila psittaci

<400> 34

Glu Glu Asp Ser Thr Ala Arg Gly Gly Ile Ile Leu Pro Asp Thr Ala  
1 5 10 15  
Lys Lys Lys

<210> 35

<211> 19

<212> PRT

<213> Chlamydia trachomatis

<400> 35

Glu Glu Ala Ser Thr Ala Arg Gly Gly Ile Ile Leu Pro Asp Thr Ala  
1 5 10 15  
Lys Lys Lys

<210> 36

<211> 19

<212> PRT

<213> Rattus norregiens

<400> 36

Ala Ala Glu Thr Val Thr Lys Gly Gly Ile Met Leu Pro Glu Lys Ser  
1 5 10 15  
Gln Gly Lys

<210> 37

<211> 19

<212> PRT

<213> Bos taurus

<400> 37

Ala Ala Glu Thr Val Thr Lys Gly Gly Ile Met Leu Pro Glu Lys Ser  
1 5 10 15  
Gln Gly Lys

<210> 38

<211> 18

<212> PRT

<213> Orienta tsutsugamushi

<400> 38

Gln Asn Asp Glu Ala His Gly Lys Ile Leu Ile Pro Asp Thr Ala Lys  
1 5 10 15  
Glu Lys

<210> 39  
 <211> 19  
 <212> PRT  
 <213> Spirillospora sp.

<400> 39  
 Glu Val Glu Asn Lys Thr Ser Gly Gly Leu Leu Leu Ala Glu Ser Ser  
 1 5 10 15  
 Lys Glu Lys

<210> 40  
 <211> 18  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 40  
 Ile Gln Pro Ala Lys Thr Glu Ser Gly Ile Leu Leu Pro Glu Lys Ser  
 1 5 10 15  
 Ser Lys

<210> 41  
 <211> 54  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 41  
 gaagttgaaa ccaaactctgc tgggtggtatc gttctgaccg gttctgctgc tgcg 54

<210> 42  
 <211> 61  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 42  
 aattcgagc agcagaaccg gtcagaacga taccaccagc agatttggtt tcaacttcca 60  
 t 61

<210> 43  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> linker

<400> 43  
 Met Glu Val Glu Thr Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser  
 1 5 10 15  
 Ala Ala Ala Asn  
 20

<210> 44  
 <211> 61



<212> DNA  
<213> Artificial Sequence

<220>  
<223> linker

<400> 44  
aattatggaa gttgaaacca aatctgctgg tggatcgtt ctgaccggtt ctgctgctgc 60  
g 61